

Dr. Fuzhong Weng

NOAA/NESDIS/Center for Satellite Applications and Research, Camp Springs,
MD

Email: Fuzhong.Weng@noaa.gov

Dr. Fuzhong Weng is currently the chief of Sensor Physics Branch, NOAA/NESDIS/Center for Satellite Applications and Research. During 2002-2005, he was the Deputy Executive Director of Joint Center for Satellite Data Assimilation. Since 2008, he has been also appointed as the Sr. Scientist of Joint Center for Satellite Data Assimilation. He received his Ph.D. degree in 1992 from Department of Atmospheric Science, Colorado State University (CSU). Dr. Weng is a leading expert in satellite instrument calibration, radiative transfer theory and modeling, satellite microwave remote sensing, product developments, and applications of satellite data in weather and climate prediction models. He developed several fast scattering and polarization radiative transfer models and land surface microwave emissivity models which are now used in NCEP global data assimilation systems and NESDIS microwave retrieval systems. He also developed one dimensional variation method to retrieve precipitation, cloud liquid/ice, temperature and water vapor profile, surface temperature and emissivity using satellite passive microwave sensors. In 1990s, he developed several SSM/I and AMSU products such as cloud liquid water and water vapor, and precipitation which have been used by NOAA and Navy, and Global Precipitation Climatology Project. The AMSU rainfall product is now being used in NWS field offices to monitor tropical storm potential rainfall and the AMSU and SSM/I cloud liquid water products are used by NCEP, Metoffice and ECMWF for quality control in radiance assimilation. He also developed AMSU and SSM/I calibration algorithms such as correction of scan dependent biases and radar beacon contamination. He have been awarded by NOAA and DOC for his many contributions to satellite remote sensing, instrument calibrations and radiative transfer modeling science and modeling.